

Claim 13. (currently amended) An analyzing apparatus comprising:

- a probe needle for detecting a fault location of a semiconductor device;
- an observation device for observing and identifying a location of said probe needle;
- a positioning mechanism for positioning said probe needle above the fault location as detected;
- a solution supply device independent from said guide probe, for supplying a solution containing a coloring agent and a volatile solvent above ~~to~~ the fault location from outside of said probe needle toward the tip of said probe needle until said solution touches a the tip of said probe needle; and
- a heating unit for evaporating the volatile solvent to form a mark consisting of the coloring agent surrounding the fault location.

Claims 14 – 20 (original)

REMARKS

1. Claims 1 - 20 are pending in the application. Claims 1, 7, and 13 have been amended. It is believed that no new matter has been added by these amendments. Support for these amendments can be found in the specification, claims and drawings of the application as originally filed.

2. The Official Action rejected claims 1 - 20 under 35 USC §103(a) stating that the claims are “unpatentable over B.G. Casner et al (US 3572400) in view of Nadeau (US 4992729).” The Official Action states that “...B.G. Casner et al is silent on a solution supply device independent from guide needle. On the other hand, Nadeau teaches a solution supply device (11) independent from guide needle (12).” This rejection is respectfully traversed for the following reasons.

The above amendments to the claims have rendered this rejection moot. There is no prima facie case of obviousness present. The Official Action does not present any teachings, suggestion or incentive in the art to make the proposed combination of the references cited in the Official Action to make the device of the present invention. The combination suggested in the

Official Action, i.e., the solution reservoir of Nadeau in the apparatus of Casner et al., would not result in the invention of the present application.

Independent claims 1, 7, and 13 have been amended to more clearly claim the “solution supply device” as an independent and separate element of the apparatus (and method) both physically and functionally separate from the guide/probe needle. Nadeau does not disclose a liquid “reservoir” which is separate from the needle, the reservoir 11 is connected to and works directly through the needle 12. In fact Nadeau specifically states that “[t]he needle 12 and activator 23 **form part of the reservoir 11.**” (Col. 3, lines 65-66) and further that a plunger “forces the marking liquid from the reservoir 11 via needle 12 onto the semiconductor...” (Column 3, lines 55-64). This structure is clearly different from the structure (and method) of the present invention in which the guide/probe needle is totally separate from the solution supply means.

“As to claims 2, 3, 8, 9, 14, and 15”:

The Official Action cites column 2, lines 21-26 of Casner et al., for the support of Casner et al., using a volatile ink, however; this citation actually refers to marking with ink but identifies this as the process that Casner et al., are attempting to avoid. The Official Action states that Casner et al, disclose the use of ketone, ether and alcohol as the solvent (citing column 2, lines 21-26.) Applicants find no such disclosure or mention of any solvents at the cited location. Casner et al does disclose, however, the preferred use of “non-volatile drying or semidrying oils” column 8, lines 34-57.

“As to claims 4, 5, 10, 11, and 16 – 20”:

The Official Action cites column 2, lines 70-73 to show Casner et al’s disclosure of a volatile solvent when in fact this section states that “it is undesirable to use volatile, quick drying vehicles...” The Official Action states that Casner et al, disclose a heating unit for irradiating the solvent with visible light rays, citing column 2, lines 40 –50 and making reference to an “oven”. Applicants find no such disclosure or mention of any heating unit, irradiation source or method, or any drying apparatus or method at the cited location or anywhere in the Casner, et al. disclosure.

"As to claims 6 and 12":

The Official Action states that Casner et al, disclose the guide needle is the probe needle (23). In fact, all throughout the disclosure, Casner et al., distinguish the probe needle (16) from the pen(22) with applicator tip (23). Our needle can also function as a probe (page 3, lines 7 - 10).

The present invention can be easily distinguished from the proposed combination of the disclosures of the Casner et al., and Nadeau patents. In view of the many differences between the present invention and the disclosures of Casner et al., and Nadeau, the separate and independent properties of the solution supply means of the present invention and the lack of teaching or suggestion of such an independent supply means in either of the cited patents, the §103(a) rejection cannot be supported..

Therefore, in view of the above amendments and remarks, it is believed that claims 1 - 20 are now in condition for allowance and Applicants respectfully request reconsideration of the application, withdrawal of all objections and rejections and that claims 1 - 20 be allowed to issue at an early date. If for any reason the application in its newly amended form is not deemed to be in condition for allowance, the Examiner is respectfully requested to contact the Applicant at the telephone number indicated below so that additional action may be taken as required.

Respectfully submitted,
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